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05/22/96

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

REPLY TO THE ATTENTION OF:

May 22, 1996 SR-6J

John Seymour, P.E.
Woodward-Clyde Consultants
38777 W. Six Mile Rd., Ste. 200
Livonia, MI 48154

Re: Comments on Remedial Design Workplan for the Albion-Sheridan Township Landfill Superfund Site

Dear Mr. Seymour:

U.S. EPA has completed its review of the RD Workplan, with the exception of the Health and Safety Plan. Most of our comments are enclosed in separate letters from the EPA QAPP reviewer and our oversight contractor (EarthTech), and from the Michigan DEQ. In a few cases, I have added handwritten notes after a comment (e.g., "Okay to wait for 30% Design to do this. LHE"). If you have any questions about these notes, please call me. Our comments on the Health and Safety Plan (which are advisory only) will follow when they are completed. You should not wait for them before revising the rest of the workplan. Additional comments on the RD Workplan are listed below.

Page 2-3, end of first paragraph: You probably mean to say "aquiclude" rather than "aquifer".

Page 2-5, first sentence: Please add that an additional purpose for the remedial action is to protect people and wildlife from direct contact with contaminants in the landfill.

Page 2-8: Please expand the bullet on "Tree removal/conservation" to explain that where possible, existing trees outside of the landfill cap area will be preserved.

Page 6-2: Someone knowledgeable about native plant revegetation efforts should be included in the RD team.

Page 7-1: Please **remove** Kurt Lindland from the list of people to receive design submittals. Please **add** Elizabeth Bartz, EarthTech, P.O. Box 874 (overnight mail: 5555 Glenwood Hills Parkway), Grand Rapids, Michigan 49588, phone (616) 94-4404, fax 942-6499, who should receive **two** copies of all design submittals.

Page 7-2: To help us to get design documents reviewed more quickly, please indicate in the workplan that you will submit a brief written response to all design comments. The response

should indicate where in the design the requested changes were made, or explains why the changes were not made.

Schedule (Figure 3):

1. The Scope of Work requires the Preliminary Design to be submitted within 45 days of U.S. EPA approval of the pre-design studies report, or about 12/30/96. The following tasks should be adjusted to account for this.

2. It is extremely likely that U.S. EPA will have significant enough comments on the first submittal of the Final Design that a resubmittal will be necessary. The schedule should plan on this. We are likely to need 30 days to get comments to you the first time and 14-21 days the second time. This would put final approval at about May 25 (if preliminary design is moved up in accordance with above comment).

3. The Scope of Work requires the RA Workplan to be submitted within 30 days of design approval, but I suggest you begin working on it concurrently with EPA review of the Final Design, so that it can be submitted closely following design approval. Review and approval of the RA workplan is likely to take more than the 20 days allotted, so if our review began earlier, it would be more likely that construction could begin earlier in the summer.

4. A date for finalizing site access arrangements for well installation and sampling should be added to the schedule prior to the pre-design field work.

5. Dates for finalizing site access for landfill cap construction and for finalizing institutional controls for the landfill cap and for groundwater should be added to the schedule.

Field Sampling Plan, page 4-2, third paragraph: The FSP proposes to vertically sample the weathered bedrock at 10 foot intervals, but the weathered bedrock is only about 10 feet thick in total. Kim Sakowski of the MDEQ is out of the office for a few days so I can't confirm this with her right now, but I believe vertical sampling should start 10 feet below the water table and proceed to the base of the weathered bedrock, or from approximately 30 to 60 feet below ground level.

Field Sampling Plan, page 4-3, section 4.2.1: Michigan Act 64, the hazardous waste rules, is not an ARAR for this site and the groundwater monitoring required by the ROD is unlikely to meet those rules.

Also, please note that the QAPP reviewer was not aware of our other comments about filtered vs. unfiltered samples. If you decide to use filtered samples, the QAPP should be changed accordingly.

If you have any questions about any of the comments, please call me at (312) 886-4696. I do not need a separate written response to comments for the RD workplan, but in cases where you have not made a requested change, please explain your rationale in the cover letter. I look forward to receiving your revised workplan within 21 days, as required in the Order.

Sincerely yours,

Leah Evison

Leah H. Evison
Remedial Project Manager

Enclosure

cc: Dean Stockwell, WCC/Mpls. (faxed to Dean 5/22)
Kurt Lindland, EPA/ORC
Elizabeth Bartz, EarthTech
Kim Sakowski, MDEQ
} with enclosure

Comments on the
Draft Remedial Design (RD) Work Plan
and
Field Sampling Plan
for
ALBION-SHERIDAN TOWNSHIP LANDFILL
CALHOUN COUNTY, MICHIGAN
(APRIL 1996)

EARTH TECH has reviewed the Draft Remedial Design (RD) Work Plan and Field Sampling Plan (FSP) for the Albion-Sheridan Township Landfill in Calhoun County, Michigan (April 1996) prepared by Woodward-Clyde Consultants (WCC). Based on this review, EARTH TECH has developed the following list of comments for use by the U.S. EPA.

DRAFT REMEDIAL DESIGN (RD) WORK PLAN - ALBION-SHERIDAN TOWNSHIP LANDFILL

Page 2-2, Contaminants of Concern, 2nd Paragraph

Arsenic was present at 126 µg/l, not 126 mg/l.

Page 2-6, Restrictive Covenants/Deed Restriction, 2nd Paragraph

The ROD states 2 µg/l, not 2 mg/l.

Page 3-3, Section 3.2.1, Paragraph 3

The text discusses the use of native species at the site based on study results. One of the criteria specified is that the "use of native species is practical." It would be beneficial if the meaning of "practical" was defined through further explanation. Can be done in predesign studies report. LHE

Page 3-3, Section 3.2, General

The SOW specifies that several monitoring wells (LF01, LF02, LF03, MW-West, MW-South and MW-East) are to be abandoned prior to construction of the landfill cap. The work plan and associated FSP do not address this requirement.

Page 3-4, 4th Bullet

Is the U.S. EPA's "Landfill Gas Generation Model" going to be used to calculate the downwind concentrations? If not, please state how this will be calculated.

Page 3-4, 3rd Paragraph

Please provide more detail with regard to the passive gas venting system (spacing, depths, size of vent, etc.). OK to wait for 30% design. LHE

Page 3-4, Section 3.2.3, Additional Monitoring Wells

This paragraph indicates that all the new wells will be vertically sampled. This is consistent with the SOW but inconsistent with the FSP. ~~See next comment.~~

~~**Page 3-5, Section 3.2.6, Materials Acceptance**~~ Page 2-7:

The PRP group may want to consider the use of "filter fabric" to prevent plugging. of drainage layer. LHE

Page 3-6, Section 3.3.1, Preliminary Design

Add the following bullet: "Proposed cleanup verification methods."

Page 5-2, Section 5.2, Meetings

The PRP group may want to change "Owner" to "PRP Group."

DRAFT REMEDIAL DESIGN (FSP) FIELD SAMPLING PLAN ALBION-SHERIDAN TOWNSHIP LANDFILL

Page 4-2, Section 4.1.3, Paragraph No. 2

The text states that vertical aquifer sampling (VAS) will be completed at "MW15SB as specified in the ROD." The Statement of Work (SOW) states that "the respondents shall vertically sample each of the new monitoring wells in accordance with current MDNR guidance." The (FSP) should be revised to be consistent with the SOW and work plan.

Page 4-6, Section 4.4.1, Paragraph 1

The (FSP) states that samples obtained during the pre-design study for metals analyses will be unfiltered. Previous work at the site has been completed using filtered samples. EARTH TECH believes the potential exists for metals results to vary from prior sampling events as a result of not filtering the samples. This potential is increased by the method of sampling to be employed (bailing) which increases the amount of suspended solids in the sample which may influence the analytical results for the sample. Unfiltered samples obtained using low-flow sampling may be appropriate; however, it may be wise to compare filtered to unfiltered results obtained during the same sampling event before changing filtration requirements.

Page 4-6, Section 4.4.2, Paragraph 1

The FSP defines low flow sampling as purging using a dedicated bladder pump at a rate of less than 1 liter per minute (L/min). The discussion in the following paragraph references classification of low-flow sampling by evaluating the intake velocity of the downhole sampling device with respect to the yield of the formation. How was (or how will) this evaluation be made? EARTH TECH's research and experience with low-flow sampling has found that sampling at a rate of less than 500 milliliters a minute (ideally 100-300 ml/minute) is appropriate during low-flow sampling for volatiles, semivolatiles and metals.

Page 4-6, Section 4.4.2, Paragraph 2

The work plan specifies that temperature, pH, and specific conductance will be monitored during purging to determine when stabilization has occurred. The theory being that when stabilization of field parameters occurs, representative groundwater is being recovered from the well. Previous work at the site has determined Eh and dissolved oxygen to be indicator parameters which correlate and/or influence the concentrations of arsenic in groundwater. In addition, the literature on low-flow sampling draws a direct correlation between the detected concentrations of some analytes and the turbidity of the sample. Higher turbidity samples generally show higher concentrations of certain analytes especially PNAs and metals. EARTH TECH suggests that the U.S. EPA consider the use of monitoring Eh, dissolved oxygen and turbidity during purging as indicator parameters to evaluate when representative groundwater is being recovered.

Page 4-6, Section 4.4.1 and 4.4.2

The potential exists for analytical results obtained for samples collected during the Pre-Design monitoring event and subsequent O&M monitoring events to differ due to sampling methodology (e.g. bailer vs. low-flow purging). How will WCC evaluate this data and compensate or explain differences?

Table 2

Table 2 specifies the number of duplicate samples field (rinsate) blanks and trip blanks that will be collected during the sampling event. With respect to duplicates and rinsate blanks, there is a footnote which states that these QC samples will be collected at a rate of one per every ten samples. Since 35 samples are to be collected, shouldn't the number of duplicates and rinsate blanks be four rather than three? Increasing this number to four is consistent with the text included in SOP 5.

Table 3

See comment above pertaining to duplicates and rinsate blanks above.

SOP-01, Section 3

Will permanent or temporary casing be used during the boring advancement with the rotary wash methods suggested? If not, how does WCC intend to keep the borehole open while utilizing rotary wash drilling methods and a clear water drilling fluid? If permanent casing to bedrock is not utilized, isn't there the potential to pull contaminants in the unconsolidated deposits down into the bedrock while recirculating the drilling fluid?

SOP-01, Section 3

Where will the water utilized during drilling be obtained? Will this water be analyzed for the contaminants of concern before it is used?

SOP-01, Section 3

Will the I.D. (inside diameter) of the tricone-roller bit utilized really be approximately 6 inches? We assume that you mean the outside diameter of the bit will be 5 7/8-inches.

SOP-01, Section 3

Will any sampling take place to confirm the depth to bedrock?

SOP-01, Section 3

The text states that samples will be collected during VAS "if required". How or why would VAS be completed without sampling?

SOP-01, Section 3

The text generally discusses the procedures to be used during VAS; however, the text does not define the type of samples to be collected nor the procedures to be used in determining the need to advance the boring. Please provide a discussion which details the following:

- The procedures to be followed during VAS;
- The type of samples to be collected;
- The analytical methods to be used to analyze the samples;
- The laboratory turnaround time to be utilized; and,
- The rationale to be used to decide whether to extend the boring.

SOP-01, Section 4.2

EARTH TECH is not familiar with the classification system used to describe the steel protective casings to be used at the site (i.e. schedule 40).

SOP-01, Section 4.2

Why are the surface casings (protective casings) being set in a grout mixture instead of concrete? The stability and durability of the commercially available "bag-mix" concrete mixes is considered superior to the grout mixture specified to seal/set the protective casing

SOP-01, Section 4.5

EARTH TECH's recent experience in Michigan has revealed that the Michigan Department of Environmental Quality (MDEQ) formerly the Michigan Department of Natural Resources (MDNR) has take a strong position that the maximum length of a screened interval (including filter pack) should be no greater than six feet. This interpretation may vary from district to district, however, it is a point which should be considered.

SOP-01, Section 5.1, Paragraph 1

The text discusses flushing formation water and sediments from the borehole using drilling fluids diluted with water. This is inconsistent with SOP-01 Section 3 which states that water will be used as the drilling fluid. Please clarify?

SOP-01, Section 5.1, Paragraph 4

The text discusses installing a bentonite pellet seal by raising the augers approximately one foot above the filter pack. The method of drilling referenced in the work plan and preceding sections of SOP-01 is rotary-wash boring. Please resolve the inconsistency in this SOP.

SOP-01, Section 5.1, Paragraph 5

The text discussing the annular space backfill to be placed above the bentonite seal specified in this paragraph is cement-bentonite grout. Section 4.2 of the same SOP specifies that a "reduced-pH, high-solids bentonite grout" will be used as the annular space backfill. Please resolve the inconsistency in this SOP.

STATE OF MICHIGAN

JOHN ENGLER, Governor

DEPARTMENT OF ENVIRONMENTAL QUALITY

HOLLISTER BUILDING, PO BOX 30473, LANSING MI 48909-7973

RUSSELL J. HARDING, Director

REPLY TO:

ENVIRONMENTAL RESPONSE DIVISION
KNAPPS CENTRE
PO BOX 30426
LANSING MI 48909-7926

May 15, 1996

Ms. Leah Evison (HSRW-6J)
U.S. Environmental Protection Agency
Region 5
77 West Jackson Boulevard
Chicago, Illinois 60604

Dear Ms. Evison:

Please find listed below, the Michigan Department of Environmental Quality's (MDEQ) comments on the Remedial Design Work Plan for the Albion-Sheridan Township Landfill located in Calhoun County, Michigan.

RD Work Plan

1. Page 2-2, Section 2.1 Site Description, Contaminants of Concern: The maximum concentrations of arsenic in groundwater was 126 ug/l as reported in the RI. The text states 126 mg/l.

2. Page 2-4, Section 2.2 Summary of Previous Activities, sixth paragraph: Please identify RI/FS contractor as WW Engineering & Science.

3. Page 3-1, Section 3.0 Remedial Design Scope of Work, Task V: Under Reports, please correct references to read, "Prefinal Construction Completion Report" and "Final Construction Completion Report". LATE

4. Page 7-1, Section 7.1 Project Deliverables: The correct mailing address for all overnight mail is: 301 S. Capitol, Lansing, Michigan, 48933. Please make this correction.

Pre-Design Field Sampling Plan

5. Page 4-2, Section 4.1.3 Groundwater Sampling and Analysis Program, third paragraph, last sentence: Please replace "unweathered" with the correct reference "weathered".

6. Page 4-6, Section 4.4.1 Pre-Design Groundwater Monitoring Field Procedures: During the pre-design groundwater monitoring the proposal is to use a bailer and to not filter metals. During the regular operational monitoring, a pump and packer assembly with groundwater filtering for metals will be used. This

appears to be inappropriate. It will not be possible to compare pre-remedy groundwater sample results to post remedy groundwater sample results. This is because of two factors: 1) analysis of unfiltered groundwater samples will invariably report higher levels of metal contamination than filtered samples. This is due to the higher level of inorganics attached to clay and silt sized particles, and 2) bailers are known to create more turbid samples than are produced by pumps. Thus, pre-design samples would likely show markedly higher levels of metal contamination then samples taken after remedy implementation simply as a result of sampling procedures.

The MDEQ recommends that the same sampling techniques be used after remedy implementation that were used prior to remedy implementation so that data is comparable.

Standard Operating Procedure - Field Sampling Plan

7. SOP-01 Monitoring Well Installation in Bedrock Aquifer, Section 3.0 Drilling Procedure, item 3: It is generally preferable to use a drilling technique that does not lose drilling fluids to the formation. However, at this site it would appear impractical to mobilize a more advanced drill rig to do one VAS boring. If a water rotary method of drilling must be used for vertical aquifer sampling, then the amount of water lost to the formation between sampling events should be carefully noted. When purging begins, the volume of drilling fluids lost to the formation should be removed before the normal sampling and purging of the well takes place.

8. Figure SOP 1-2: The sand pack should extend two feet above the screen.

9. SOP-02 Monitoring Well Development, Section 3.0 Procedures: In order for well development to be successful, some type of surging action will be necessary during the development process. This is because it is necessary to prevent bridging of fine materials in the filter pack. The proposed methods appear to lack sufficient vigor to effectively address this problem.

10. SOP-07 Groundwater Sampling, Section 3.3 Well Purging, item 3: Slow recharging wells should not be purged dry. The reason is that if the screened interval is purged dry, groundwater recharging the well must cascade down the screen. This strips any volatiles in the groundwater and likely changes the chemistry in other ways that would effect sample results. The way to avoid this problem is to set the pump intake just above the screened interval. Thus, the well will never be dewatered to below the screened interval. This, of course, can not be done for wells screened at the water table, but will be effective for deeper wells.

    Section 3.3 Well Purging, bullet 9: Slow recharging wells should not be purged dry. The reason is that if the screened interval is purged dry, groundwater water recharging the well must cascade down the screen. This strips any volatiles in

the groundwater and likely changes the chemistry in other ways that would effect the sample results. The way to avoid this problem is to set the pump intake just above the screened interval. Thus, the well will never be dewatered to below the screened interval. This, of course, can not be done for wells screened at the watertable, but will be effective for deeper wells.

Although it is not mentioned in this SOP, it was previously noted that a pump and packer unit would be used for the monitoring program sampling. If a packer is not going to be used, care should be taken to remove the stagnant water in the casing. If the pump intake is placed near the top of the screen without the packer, the pump will tend to draw water from the screened interval. The stagnant water above the pump will tend to slowly mix with water coming from the screened interval. To avoid this in high recovery wells, one of two techniques can be used. Either the pump intake can be placed near the top of the water column throughout the entire purging/sampling process, or the pump can slowly be lowered to the screen depth during the purging of the first two volumes.

The most efficient technique for most wells will be the one proposed in the plan; namely, use of a pump and packer.

Health and safety Plan

11. Page 6-3, Section 6.1 Multigas Detector Tubes: Vinyl chloride has been detected at the site. Although it is not expected to be a problem, it is not normally detected by field instruments. Thus, it is recommended that vinyl chloride be sampled for, using a chemical specific Draeger tube.

12. Page 6-4, Section 6.2 Air Response Levels: Response levels for vinyl chloride detection should be added to the response list.

If you have any questions or would like to discuss anything included in this letter, please feel free to contact me.

Sincerely,

Kim Sakowski
Superfund Section
Environmental Response Division
517-335-3391

cc: Albion-Sheridan file (L1)
SMU2 file

MEMORANDUM

DATE: May 9,1996

SUBJECT: Review of the *Draft* Quality Assurance Project Plan (QAPP) for the PRP-Lead Remedial Design (RD) Pre-Design Groundwater Sampling and Analysis Activities for the Albion-Sheridan Township Landfill in Calhoun County, Michigan

FROM: Richard L Byvik
Technical Support Section (TSS)

TO: Leah Evison
Remedial Project Manager

We have reviewed the *draft* QAPP for the PRP-lead RD pre-design Groundwater Sampling and Analysis activities for the Albion-Sheridan Township Landfill, Calhoun County, Michigan, and determined that the subject QAPP is unacceptable. The subject QAPP was received by TSS on April 22, 1996, Log-in # 2277.

Attached to this memorandum are TSS comments and recommendations that describe the deficiencies and provide guidance for their correction.

If there are any questions regarding this memorandum, contact Richard Byvik (312-353-3114) of the TSS Staff.

Attachment

cc: Steve Ostrodka, SRT-4J
Sally Averill, SR-6J

ALBION-SHERIDAN TOWNSHIP LANDFILL
CALHOUN COUNTY, MICHIGAN

REMEDIAL DESIGN (RD)
QUALITY ASSURANCE PROJECT PLAN (QAPP)

I. SIGNATURE PAGE

A. Under the second line delete, "Steven Ostradka, Chief of Technical Support Section." Replace with, **Superfund Quality Assurance Reviewer**.

B. On the Distribution List page amend Steven Ostradka, to **Stephen Ostrodka**.

II. PROJECT DESCRIPTION

A. Section 1.4.1
In this Pre-Design sampling is there a specific objective for the determination of **Arsenic**? See QAPP Section 7.2.1. Reduction of **Arsenic** is an objective of the Operation and Maintenance Groundwater Monitoring Program.

B. Section 1.4.2.2
It should be specified here that Groundwater samples will be collected unfiltered. See Field Sampling Plan (FSP) Section 4.4.1.

C. Section 1.4.3 Data Quality Objectives (DQOs)
The 5 Analytical DQO Levels are being eliminated. In the future submissions of the QAPP Addenda for **Groundwater Monitoring**, and, maybe, **Air Monitoring**, the DQOs should be specified for all the required parameters.

D. Table 1-1 and FSP TABLE 2
For **35** Investigative Samples **4** Field Duplicates and **4** Rinsate Blanks will be required.

III. SAMPLING PROCEDURES

TABLE 4-1 (Continued)
Delete footnote 4. Groundwater samples are not being filtered.

IV. ANALYTICAL PROCEDURES

A. TABLE 7-1
For several parameters the Lab SOP Name is not the same as the SOP provided in ATTACHMENT A.

B. TABLE 7-2 1st page, typo
For **mercury** amend Laboratory SOP Name to **CORP-MT-0005**.

C. TABLE 7-2 2nd page
For two parameters the Lab SOP Name is not the same as the SOP provided in ATTACHMENT A.

D. TABLE 7-4 typo
For **alpha-BHC** amend MDL to **0.0054 ug/l**. See Pesticides/PCBs MDL study.

V. PERFORMANCE AND SYSTEM AUDITS

Section 10.2.4
Delete this section. The Central Regional Laboratory no longer conducts laboratory audits.

RD WORK PLAN

A. Section 2.3.2, pg 2-6, 2nd paragraph, typo
Amend 2 mg/l of **arsenic**, to **2 ug/l**. See Statement of Work Section II.2. page 2.

B. Section 6.0, page 6-1, 3rd paragraph, typo
Amend Figure 5, to Figure **4**.

RD HEALTH AND SAFETY PLAN (HASP)

A. Section 6.1, pg 6-2, 3rd paragraph
It is recommended to denote the concentration of **Methane** in the calibration.

B. Section 10.8 and Figure 1
It would be helpful to include **Albion Community Hospital** in the map and designate the route from the site to the hospital.

REMEDIAL PRE-DESIGN FIELD SAMPLING PLAN

A. TABLE OF CONTENTS
   1) TABLE 4 is missing. Please provide table , or delete the entry.
   2) FIGURES 3, 4, and 5 are not listed.

B. Section 4.4.1
Clarify the possible disparity. It states here that dedicated bailers will be used for collecting samples. In **SOP-01**, Section 5.1, last paragraph, indicates that dedicated bladder pumps will be installed.

C. Section 8.0 ANALYTICAL METHODS
Duplicate of page 8-1. Delete one.

D. SOP-05 Section 1.0
For the Soil/Sediment sample matrix one duplicate is collected for every 20 investigative samples. One in 10 is allowed, but not required.

E. SOP-07 GROUNDWATER SAMPLING
   1) Section 2.0
      Delete water filtering equipment, since samples are not being filtered.
   2) Sections 3.3 and 3.4
      Bailers are not recommended for purging and sample collection
   3) It is recommended to collect samples within 2 hours of purging. This will lessen exchanging gases with the atmosphere and interacting with well casing material.
   4) TABLE SOP 7-1
      Delete the **Filtered Metals** line from the table.

ATTACHMENT A
STANDARD OPERATING PROCEDURES FOR LABORATORY TASKS

It would be helpful to include a Table of Contents for this attachment.

I. DETERMINATION OF VOLATILE ORGANICS BY GC/MS CORP-MS-0002

Section 1.1

Provide Retention Times (RTs) for the compounds listed in tables 5 and 6.

II. EXTRACTION AND CLEANUP OF ORGANIC COMPOUNDS FROM WATER AND SOIL CORP-OP-0001

Pages 63 through 90

These pages can be eliminated, because **chlorinated herbicides** are not project parameters.

III. GAS CHROMATIC ANALYSIS BASED ON METHODS CORP-GC-0001

A. APPENDIX A
This appendix can be deleted, since it will not be used for analytical work.

B. Section 1., pg B1 and Table B-1
Provide RTs for the compounds in the table.

C. Section 13.1 typo
Amend Table B-7, to B-9.

D. Table B-1
It is recommended to add Reporting Limits to this table for **Endrin Ketone**, **a-Chlordane**, and **g-Chlordane**. They are project parameters (QAPP TABLE 7-4). See Table B-3, too.

E. APPENDIX C
This appendix can be deleted. **Phenoxy acid herbicides** are not project parameters.

IV. ACID DIGESTION OF AQUEOUS SAMPLES CORP-IP-0003

Section 8.3

In U.S. EPA Region V field filtration should be done within 15 minutes. Since samples are not going to be filtered in this project, this section should be deleted.

V. PREPARATION AND ANALYSIS OF MERCURY IN AQUEOUS SAMPLES CORP-MT-0005

Sections 3.1 and 3.2

In this project **Total Mercury** is required, therefore, samples are not filtered. Sections 3.1 and 3.2 can be deleted.